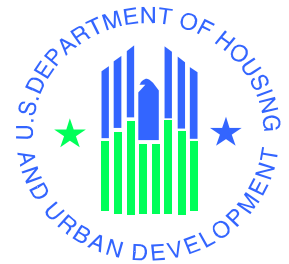


Study of Single Family Property Management Systems and Data

SYSTEMS DECISION PAPER



June 23, 2003

**Office of Housing
Federal Housing Administration
Department of Housing and Urban Development**

System Decision Paper

Table of Contents

| | <u>Page #</u> |
|---|---------------|
| 1.0 GENERAL INFORMATION | 1-1 |
| 1.1 Purpose | 1-1 |
| 1.2 Scope | 1-1 |
| 1.3 System Overview | 1-2 |
| 1.4 Project References..... | 1-3 |
| 1.5 Acronyms and Abbreviations..... | 1-5 |
| 1.6 Points of Contact..... | 1-7 |
| 1.6.1 Information | 1-7 |
| 1.6.2 Coordination | 1-7 |
| 2.0 INITIATE PHASE | 2-1 |
| 2.1 Overview of the Initiate Phase..... | 2-1 |
| 2.2 Current Procedures | 2-5 |
| 2.3 Benefits | 2-7 |
| 2.4 Project Scale | 2-8 |
| 2.5 Funding | 2-9 |
| 2.6 Schedule of Events | 2-9 |
| 2.7 Decision to Proceed | 2-11 |
| 2.8 Authorization Memoranda | 2-11 |

1.0 GENERAL INFORMATION

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The Federal Housing Administration's (FHA's) Office of Insured Single Family Housing administers a property management program and oversees the acquisition, marketing, and disposition of approximately 60,000 properties per year. Single Family Housing maintains the Single Family Acquired Asset Management System (SAMS) and other property management support systems to assist with program operations, such as case management, financial management, contractor monitoring, business evaluation, and business partner management. SAMS and the other systems must fully support these business functions in order for FHA to effectively and efficiently manage its program.

Since the original implementation of SAMS, Single Family Housing has changed the property management program and its business model. In an effort to streamline operations, FHA began contracting out the Real Estate Owned (REO) functions in 1997. Consequently, Single Family Housing's role shifted to oversight and monitoring rather than performing the day-to-day REO activities. Over time, FHA adapted SAMS and developed supplemental systems to support both the property management and contractor oversight functions. While FHA has made extensive modifications to SAMS and developed other support systems, numerous challenges remain with its property management operations within the current systems environment. For example, maintenance costs remain excessively high. Furthermore, FHA has received criticisms from the General Accounting Office (GAO) about its single-family property management operations, systems, and monitoring performance in various studies. As a result, GAO has placed Single Family on its high-risk list since 1994. In its financial statements, FHA also has received material weaknesses and reportable conditions related to single-family systems, including:

- FHA's systems environment provides insufficient support to its business processes.
- FHA lacks control over budget execution and funds.
- FHA performs inadequate monitoring over its Single Family property inventory.

1.1 Purpose

Single Family Housing seeks to increase SAMS' functionality or implement a new system. FHA needs to assess its long-term business needs and the capacity of its current systems prior to any further systems development efforts. The *System Decision Paper* documents HUD's decision-making process and serves as the principal document for recording essential system information. All decisions made during the system development lifecycle and the schedule of accomplished activities are recorded in the *System Decision Paper*. FHA will continue to update the *System Decision Paper* at the end of every phase in the Systems Development Methodology (SDM).

1.2 Scope

This project provides FHA with a blueprint for property management and helps guide FHA towards an improved way of conducting its business. FHA performed an in-depth review of the Single Family systems supporting the property management function, including asset management, business participant management, business evaluation, and financial management. Based on this analysis, we presented an alternative solution to its current systems environment. FHA conducted this study in five primary phases:

- Phase I – Identify major business and system needs.
- Phase II – Identify major deficiencies in the current systems.
- Phase III – Develop short- and long-term alternatives.
- Phase IV – Present findings and obtain stakeholder buy-in.
- Phase V – Develop Initiate phase documents, including the *Project Plan, Needs Assessment, Feasibility Study, Risk Analysis, Cost-Benefit Analysis, System Security Plan, and Systems Decision Paper*.

1.3 System Overview

While the Department of Housing and Urban Development's (HUD) Information Technology (IT) division provides technical assistance, HUD's Office of Housing is responsible for the identification of business process and reporting needs of its systems. For single-family mortgage insurance programs, the Office of Single Family Programs and the Office of the Comptroller share responsibility for SAMS and other single-family systems.

SAMS is a mixed program and financial management system that accounts for the sale of over 60,000 properties per year valued at over \$5 billion dollars with related expenses totaling nearly \$1 billion. SAMS supports HUD staff at Headquarters, Homeownership Centers (HOCs), and Management and Marketing (M&M) contractors with tracking single-family properties from acquisition through resale. In addition to collecting data related to the management, marketing, and disposition of properties, SAMS maintains financial records in compliance with the Federal Credit Reform Act and processes disbursements to M&M contractors, vendors, taxing authorities, and homeowners' associations.

SAMS is hosted on HUD's IBM-compatible mainframe and is connected to HUD's network, HINET, through a COMTEN front-end processor. Software used in SAMS includes: COBOL, DB2, CICS, EXTRA, JCL, NOMAD, and the Configuration Management tool, Endeavor. SAMS development tools include Electronic Data System's (EDS) proprietary case tool – INCASE.

The following table provides the requisite system information.

| | |
|---|--|
| Responsible Organization | Federal Housing Administration – Office of Housing |
| System Name or Title | Single Family Acquired Asset Management System |
| System Code | A80S |
| Project Cost Accounting Sub-system (PCAS) Number | To Be Determined |
| System Category | Major application |
| Operational Status | Operational |
| Users | FHA and M&M contractors |

| | |
|---------------------------------------|---|
| System Input | Mortgagee data, transmittal check data, property acquisition data, claim data, lockbox and Fedwire collection data, check data, valid property case data, property maintenance data, property acquisitions |
| System Output | New acquisitions, inventory status and sales data, property listing, property title data, SAMS general ledger balances, disbursement data, and sales related data. |
| Interaction With Other Systems | The SAMS environment is composed of numerous interconnected and stand alone systems. SAMS shares data with the following systems through manual or automated interfaces: Single Family Insurance System (SFIS), Computerized Homes Underwriting Management System (CHUMS), Institutional Master File (IMF), A80N, Single Family Insurance Claims Subsystem, Lockbox, File Transfer Protocol (FTP) Server, HUD Web, Kiosks, Single Family Data Warehouse, TEAM, Fedwire system (Cashlink), Cash Control Accounting Reporting System (CCARS), ECS system (Electronic Funds Transfer (EFT) disbursements), and the FHA Subsidiary Ledger |

1.4 Project References

FHA used the following reference materials to prepare the *System Decision Paper*.

| Document | Date |
|--|----------------|
| EDS, HUD/SAMS Release Summary | No date noted |
| Information Technology Reform Act of 1996 | No date noted |
| IBM Endowment for the Business of Government, <i>IT Outsourcing: A Primer for Public Managers</i> , Chen, Perry | February 2003 |
| Joint Financial Management Improvement Program, <i>Property Management System Requirements</i> | October 2002 |
| Management & Marketing Service Contract Terms and Conditions | No date noted |
| National Institute of Standards and Technology, <i>Special Publication 800-12, An Introduction to Computer Security: The NIST Handbook</i> | October 1995 |
| National Institute of Standards and Technology, <i>Special Publication 800-14, Generally Accepted Principles and Practices for Securing Information Technology Systems</i> | September 1996 |

| Document | Date |
|---|----------------|
| National Institute of Standards and Technology, <i>Special Publication 800-16, Information Technology Security Training Requirements: A Role- and Performance-Based Model</i> | April 1998 |
| National Institute of Standards and Technology, <i>Special Publication 800-18, Guide for Developing Security Plans for Information Technology Systems</i> | December 1998 |
| National Institute of Standards and Technology, <i>Special Publication 800-26, Security Self-Assessment Guide for Information Technology Systems</i> | November 2001 |
| National Institute of Standards and Technology, <i>Special Publication 800-40, Procedures for Handling Security Patches</i> | August 2002 |
| National Institute of Standards and Technology, <i>Special Publication 800-44, Guidelines on Securing Public Web Servers</i> | September 2002 |
| Office of Management and Budget Circular Number A-130, <i>Management of Federal Information Resources, Appendix III</i> | November 2000 |
| United States Department of Housing and Urban Development, <i>Business Process Reengineering</i> | March 1997 |
| United States Department of Housing and Urban Development, <i>FHA Audit of Financial Statements Fiscal Years 2002 and 2001</i> | January 2003 |
| United States Department of Housing and Urban Development, <i>Final Draft SAMS User's Guide</i> | August 2002 |
| United States Department of Housing and Urban Development, <i>Management Structure Design and Specifications in the M&M Contract Environment For Single Family Property Disposition</i> | January 1999 |
| United States Department of Housing and Urban Development, <i>M&M Contractor Compliance Review, Risk-Based Targeting Model Web Tool Training</i> | August 2002 |
| United States Department of Housing and Urban Development, <i>Office of the Single Family Housing Target Architecture Development</i> | September 2002 |
| United States Department of Housing and Urban Development, <i>Processing Procedures and Internal Controls for M&M Contractors</i> | No date noted |

| Document | Date |
|---|---------------|
| United States Department of Housing and Urban Development, <i>SAMS Reports Training Manual</i> | May 2002 |
| United States Department of Housing and Urban Development, <i>Single Family Housing Target Architecture</i> | August 2002 |
| United States General Accounting Office, <i>Financial Management: Strategies to Address Improper Payments at HUD, Education, and Other Federal Agencies</i> | October 2002 |
| United States General Accounting Office, <i>Information Technology: Leading Commercial Practices for Outsourcing of Services</i> | November 2001 |
| United States General Accounting Office, <i>Loan Origination and Foreclosed Property Management Processes</i> | November 1999 |
| United States General Accounting Office, <i>Single Family Housing: Current Information Systems Do Not Fully Support the Business Processes at HUD's Homeownership Centers</i> | October 2001 |
| United States General Accounting Office, <i>Single Family Housing: Improvements Needed in HUD's Oversight of the Property Sale Process</i> | April 2002 |
| United States General Accounting Office, <i>Single Family Housing: Stronger Measures Needed to Encourage Better Performance by Management and Marketing Contractors</i> | May 2002 |

1.5 Acronyms and Abbreviations

The following table lists the acronyms and abbreviations used in this document.

| Acronym/Abbreviation | Definition |
|----------------------|--|
| ADP | Automated Data Processing |
| ASP | Application Service Provider |
| CCARS | Cash Control Accounting Reporting System |
| CHUMS | Computerized Homes Underwriting System |
| CO | Contracting Officer |

| Acronym/Abbreviation | Definition |
|-----------------------------|--|
| COTS | Commercial-off-the-Shelf |
| EDS | Electronic Data Systems |
| EFT | Electronic Funds Transfer |
| FHA | Federal Housing Administration |
| FTP | File Transfer Protocol |
| GAO | General Accounting Office |
| GTM | Government Technical Monitor |
| GTR | Government Technical Representative |
| GUI | Graphical User Interface |
| HOC | Homeownership Center |
| HUD | U.S. Department of Housing and Urban Development |
| IMF | Institutional Master File |
| IT | Information Technology |
| ITAS | Inspection Tracking and Assessment System |
| M&M | Management and Marketing |
| OCFO | Office of the Chief Financial Officer |
| OCIO | Office of the Chief Information Officer |
| OCPO | Office of the Chief Procurement Officer |
| OIG | Office of Inspector General |
| OIT | Office of Information Technology |
| PCAS | Project Cost Accounting Sub-System |
| RBTM | Risk Based Targeting Model |

| Acronym/Abbreviation | Definition |
|----------------------|--|
| REO | Real Estate Owned |
| SAMS | Single Family Acquired Asset Management System |
| SDM | System Development Methodology |
| SFIS | Single Family Insurance System |

1.6 Points of Contact

The following sections provide a listing of contacts for additional information regarding this document and the overall project, as well as a listing of departmental organizations and their contacts that provide support and guidance related to this project.

1.6.1 Information

This table provides a list of organizational points of contact that may be needed by the document user for informational and troubleshooting purposes. All contacts are located at 451 Seventh Street, SW, Washington, DC, 20410.

| Type of Contact | Contact Name | Department | Telephone | Email/Address |
|-----------------|--------------|------------|-----------|---------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

1.6.2 Coordination

The following table provides a list of organizations that require coordination between the project and its specific support function.

| Type of Contact | Contact Name | Department | Telephone | Email/Address |
|-----------------|--------------|------------|-----------|---------------|
| | | | | |
| | | | | |

2.0 INITIATE PHASE

2.0 INITIATE PHASE

The mission of the Single Family property disposition program is to minimize its property inventory in a manner that expands homeownership opportunities, strengthens neighborhoods and communities, and ensures a maximum return to the insurance fund. FHA's Office of Insured Single Family Housing, Asset Management Division, is responsible for administering Single Family's property management program.

To fulfill its missions, Single Family relies heavily on systems to track properties, monitor contractors, capture and provide accurate accounting data to the Subsidiary Ledger, and maintain accurate portfolio data. These systems are high profile and under constant scrutiny. The systems account for assets worth billions of dollars and are subject to numerous audit reports by both the OIG and GAO. It is critical to the program that its systems effectively support program business needs while ensuring fiscal integrity.

2.1 Overview of the Initiate Phase

The Single Family systems environment is composed of numerous interconnected and stand-alone systems. SAMS, a mainframe system, provides the core support to Single Family's property disposition activities.

Since the original implementation of SAMS, Single Family Housing has changed the property management program and its business model. In an effort to streamline operations, FHA began contracting out the REO functions in 1997. Consequently, Single Family Housing's role shifted to oversight and monitoring rather than performing the day-to-day REO activities. Over time, FHA adapted SAMS and developed supplemental systems to support both the property management and contractor oversight functions. While FHA has made extensive modifications to SAMS and developed other support systems, numerous challenges remain with its property management operations within the current systems environment. For example, maintenance costs remain excessively high.

Furthermore, FHA has received criticisms from the GAO about its single-family property management operations, systems, and monitoring performance in various studies. As a result, GAO has placed Single Family on its high-risk list since 1994. In its financial statements, FHA also has received material weaknesses and reportable conditions related to single-family systems, including:

- FHA's systems environment provide insufficient support to its business processes:
 - *Case Management* – Users must navigate through numerous SAMS screens to find related pieces of information when reviewing a case file. Therefore, end-users find it difficult and time-consuming to obtain a thorough understanding of any given case. SAMS also has difficulty maintaining accurate case history and user notes. Occasionally, case histories are altered or deleted when the status of the property is changed. The case notes function is limited and difficult to use. Therefore, users do not document accurate notes and case files remain incomplete within the system. Furthermore, the system lacks the flexibility to manage and track special types of properties – such as those held off market or custodial properties – throughout the disposition process. As a result, end-users do not collect important property

management information, obtain a skewed view of the types of properties in inventory, and have an inaccurate account of the timeframes within the processing steps.

- *Communications and Document Imaging* – In many instances, requests for policy/procedural exceptions are handled via email. However, supporting documentation remains in hard copy and, therefore, must be faxed to FHA. Other types of documentation that must be mailed or sent via fax include inspections, appraisals, and supporting documentation for payments. Additionally, Single Family systems do not produce automated letters to be sent to business partners.
- *Data Analysis and Reporting* – Many end-users find SAMS reporting tool – NOMAD Report Writer – difficult to use. NOMAD uses a complex programming language and lacks a user-friendly front-end. As a result, FHA has become increasingly reliant on contractor assistance for data reporting and analysis because only a limited number of FHA staff understand and use the NOMAD reporting tool. In addition, the NOMAD reporting tool has a limited ability to conduct in-depth analyses because it is not connected to a centralized data repository with access to integrated data and can only access REO data from SAMS.
- *System Interfaces* – The current Single Family systems environment lacks automated interfaces to adequately exchange data among its internal systems. For instance, SAMS does not interface with A80N and has a limited interface with the Single Family Data Warehouse. In addition, SAMS currently lacks adequate interfaces with its business partners' systems. As a result, M&M contractors must key all entries both into SAMS and their own system.
- FHA lacks control over budget execution and funds:
 - *Funds Control* – SAMS lacks controls to verify funds availability prior to any reservations, obligations, or disbursements. Specifically, SAMS does not maintain available budgetary resources, contract values for any type of property management contracts, or contract obligations.
 - *Subsidiary Ledger* – SAMS does not provide adequate information in the proper format to FHA's Subsidiary Ledger. It does not provide sufficient information to determine the business events associated with the applicable transactions in the Subsidiary Ledger. Furthermore, SAMS cannot provide the Subsidiary Ledger with decipherable, one-to-one credit/debit pairs. Therefore, Accounting staff must manually reconcile these transactions.
- FHA performs inadequate monitoring over its Single Family property inventory:
 - *Contractor Monitoring* – HOC staff are responsible for sampling, assigning, and tracking property inspection and file review cases. The Risk Based Targeting Model (RBTM) and the Inspection Tracking and Assessment System (ITAS) were developed to meet these needs. RBTM supports the sampling and analytical processes for case file reviews. ITAS supports the sampling process for property inspection reviews. However, it currently is unable to provide any analytical support with the review process. These systems have limited, one-way interfaces with SAMS and work completely independently of other Single Family systems.

As a result of these deficiencies, Single Family Housing initiated the Study of Single Family Property Management Systems and Data. As part of the study, FHA documented business needs and current deficiencies according to Single Family's target architecture. The *Business Needs* and *Current Deficiencies* reports were finalized on April 28, 2003.

FHA also performed an alternatives analysis of property management system replacement options. The following chart defines the options selected for review.

| Alternative | Description |
|---------------------------------|--|
| Option 1 – Enhancements to SAMS | <p>This option evaluates the continued use of SAMS with modifications. In this scenario, SAMS remains the underlying system without changes to its core functionality or technology. However, SAMS continues to receive scheduled updates, such as the rent receivable module and the journal entry reclassification process. In addition, FHA assessed the value of introducing new technologies that work in conjunction with SAMS. Based on the review of the major deficiencies with SAMS, FHA proposed the following modifications in addition to those already scheduled:</p> <ul style="list-style-type: none"> ▪ Front-end graphical user interface (GUI) – Provide standardized text and graphics presentation with point and click selection. Offer functionality similar to widely used Windows and Apple applications. ▪ Contemporary reporting and analytical tool – Provide a user-friendly tool with capability to design and store queries and reports and present results in columnar or graphical format. Offer ability to easily select and join files and fields and send output to the screen, print, or file. ▪ New procurement module – Provide a procurement module to control contracts and payments. ▪ Improved communication capabilities – Provide the capability to generate letters and select an output option to print, fax, or email. Include email capability familiar in today's market, such as an address book, established groups for broadcast email/messages, and attachments. |
| Option 2 – Customized Solution | <p>This option calls for HUD personnel or its contractors to design and develop a customized system solution in-house. In this option, HUD personnel are responsible for all parts of the system development lifecycle, including:</p> <ul style="list-style-type: none"> ▪ Defining the functional and technical requirements. ▪ Selecting the appropriate technology. ▪ Designing and developing the software (developing hardware/software plan, installing the software, setting up the database, establishing security, configuring the software, converting the data, constructing the interfaces, and developing queries and reports). ▪ Testing the software and system. ▪ Training and business process re-engineering. ▪ Phasing out the old system. ▪ Modifying and operating the system. |

| Alternative | Description |
|--|--|
| Option 3 –Commercial off-the-shelf (COTS) solution | The COTS-based approach consists of signing a licensing agreement with a software vendor for property management and REO systems or other packages that are capable of meeting Single Family's requirements. In this option, FHA signs a license agreement with a software vendor for the use of a property management solution. The software vendor also offers or provides the tools for implementation, product integration, customization, and source code development associated with "gluing and wrapping" the COTS components. |
| Option 4 –Application Service Provide (ASP) Solution | With this option, an ASP will host the property management application on its own servers within its own facilities. The ASP hosts the application and provides full-scale services for implementation, training, and ongoing operational support. The service provider will shoulder the burden of database and programming administration, backup processing, and core hardware acquisition, support, and maintenance. The proposed property management system will support Single Family Housing to operate an effective program and maintain strong management controls. The property management system will provide functionalities for case management, contractor monitoring, business evaluation, and business partner management. |
| Option 5 – Data Reporting Option | <p>With this option, FHA discontinues the use of SAMS and requires the M&M contractor to report data on a pre-defined basis. In this option, HUD does not have a contractual relationship with a specific ASP. FHA forms partnerships with the IT industry and works with the industry to outline requirements for HUD's programs. Individual M&M contractors develop their own systems in-house or contract with an ASP to provide such services. HUD does not pay for the system services or have the rights to the systems. However, the M&M contractors may end up passing on the costs to HUD.</p> <p>For this option, FHA needs to develop a data warehouse or similar repository to store incoming data, create reports, and review the data to monitor adherence to contract terms. FHA also needs to perform periodic on-site audits to verify the validity of information provided. FHA may be able to leverage existing database and reporting applications. However, FHA may choose to license/purchase a data warehouse application that assists in the development of the data structures, storage, and interface.</p> |

After conducting the alternatives assessment and the cost/benefit analysis, FHA found the ASP solution to be the best option to replace SAMS. This option received the highest grand total score for meeting FHA's business and technical needs. The ASP solution will support the monitoring activities of Headquarters, the HOCs, and the daily property disposition activities of the M&M contractors. It also allows for the lowest start-up costs and the fastest implementation. The ASP solution is estimated to have the lowest initial implementation costs of the alternatives, as the ASP can leverage existing system applications and technology infrastructure. Furthermore, since an ASP would host the application outside of FHA's system environment, this option allows HUD to develop its enterprise architecture and still obtain the functionalities of a new system without conflicts in standardization. Further details of the costs of the alternative solutions can be found in the *Cost/Benefit Analysis*.

The property management system will interface with the FHA Subsidiary Ledger, which will support financial management activities. The property management system will store operational data, and the Subsidiary Ledger will store the necessary financial data. An interface between the property management system and the Subsidiary Ledger will facilitate the exchange of financial information at predetermined events or on predetermined timeframes. The Subsidiary Ledger will use the financial information to post journal vouchers, track contract spending, and perform funds control. The Subsidiary Ledger will send funds control approvals/rejections, transmittal check data, lockbox, and Fedwire collection data to the property management system. There is a wide range of interface options available to FHA, and more information will be available as the interface is defined in greater detail.

As with any option, the ASP solution has risks, particularly associated with the viability of the vendor and security controls. As detailed in the *Risk Analysis*, FHA plans to mitigate these risks by taking the following steps:

- Research and select a mature vendor with extensive industry experience and a solid financial position.
- Add terms and conditions to the contract that address mergers and acquisitions and possible failure of the vendor to provide the software and application services.
- Research the viability of dedicated application and database servers.
- Address security requirements established in the *System Security and Privacy Plan*.
- Review the vendor's facilities and business continuity plan.
- Address personnel training and background screening of the vendor's IT personnel.

SAMS is identified as a Major Application in accordance with NIST 800-18, *Guide for Developing Security Plans for Information Technology Systems*. Given the importance of this application to FHA's mission, this system must effectively support program business needs while ensuring fiscal integrity. As previously described, the current state of Single Family's systems environment provides inadequate support to FHA's management and financial responsibilities. Continued use of the 'as-is' system environment will prolong FHA's control deficiencies and weaken the public's trust in the government's ability to administer the program.

2.2 Current Procedures

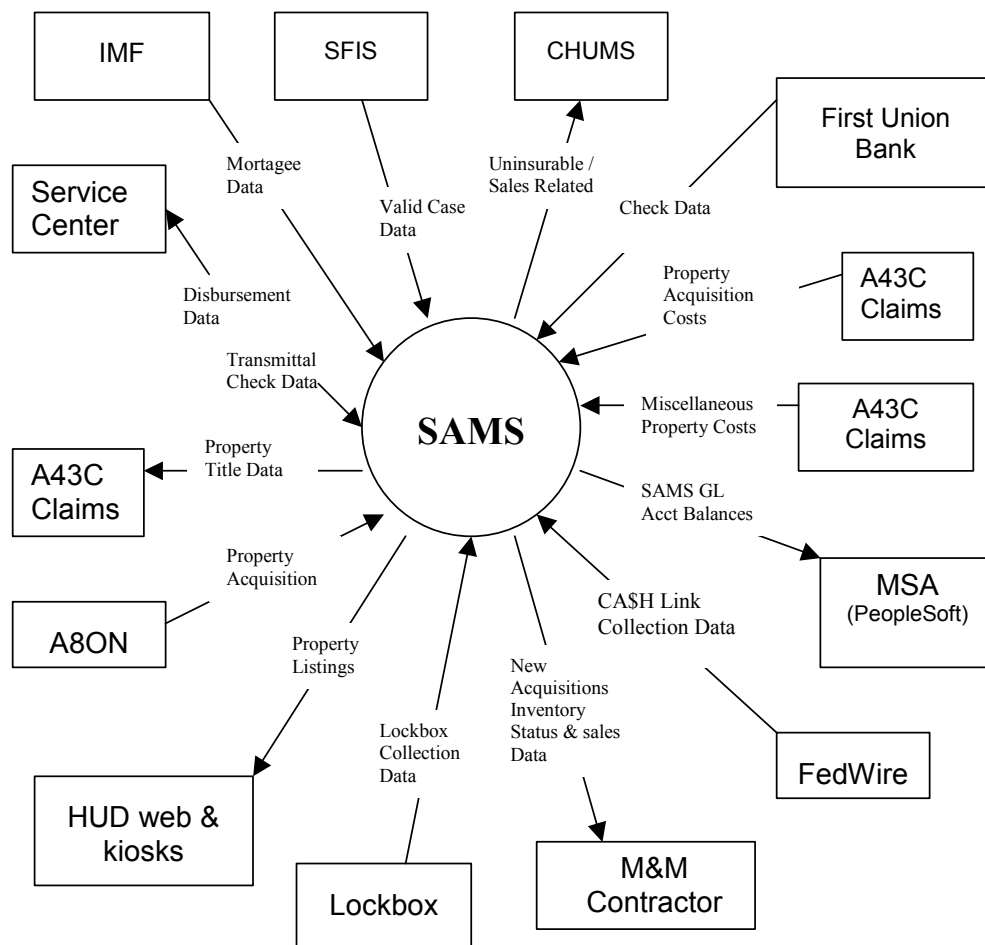
Single Family Housing maintains SAMS and other property management support systems to assist with program operations, such as asset management, financial management, business evaluation, and business participant management. SAMS and the related systems support headquarters staff, HOC staff, and M&M contractors in tracking Single Family properties from their acquisition by HUD through the steps necessary to resell the properties. At a high-level, the primary responsibilities of the three parties are:

- Headquarters – perform program oversight and policy review and guidance.
- HOCs – monitor and evaluate the performance of the M&M contractors, intervene on behalf of homeowners, and assess program success.
- M&M contractors – conduct daily REO activities from property assignment through disposition.

SAMS is a mixed program and financial management system that accounts for the sale of over 60,000 properties per year valued at over \$5 billion dollars and related expenses totaling nearly \$1 billion. In addition to collecting data related to the management, marketing, and disposition of properties, SAMS maintains financial records in compliance with the Federal Credit Reform Act and processes disbursements to M&M contractors, vendors, taxing authorities, and homeowners' associations. The annual maintenance and operating costs for SAMS is approximately \$6 million per year. For detailed documentation regarding SAMS procedures, refer to the SAMS User's Guide, August 2002.

The following graphic depicts interfaces to and from SAMS, as documented on January 2002. HUD is in the process of establishing an enterprise architecture. As such, some of the functionality of the systems in the following graph may be combined in the development of replacement systems or may be moved to new technology platforms. During later phases of the project, FHA will work with the OCIO and OIT to address interface issues.

Manual and Automated Interfaces with SAMS as of January 2002



SAMS is hosted on HUD's IBM-compatible mainframe and is connected to HUD's network, HINET, through a COMTEN front-end processor. Software used in SAMS includes: COBOL, DB2, CICS, EXTRA, JCL, NOMAD, and the Configuration Management tool, Endeavor. SAMS development tools include EDS's proprietary case tool – INCASE.

2.3 Benefits

The proposed solution will significantly reduce annual operating and maintenance costs for the property management system. It will also provide several key improvements in functionality from the current systems environment as well as assist FHA in meeting the objectives defined within the President's Management Agenda and HUD's Strategic Plan.

FHA is currently spending over \$6 million per year for SAMS. In the *Cost/Benefit Analysis*, it is estimated that the ASP solution would provide significant savings through a reduction in yearly operational costs. It is estimated that operational costs for the ASP solution would be approximately \$2.8 million annually, which would provide FHA with a \$27.3 million savings in operational costs over a five-year timeframe.

The proposed solution will be a web-based system with property management and REO functionalities. It will have a comprehensive workflow engine that will assign work based on predetermined events. The combination of the web and the workflow engine will make the system easily accessible to stakeholders and streamline business processes. Turn-around timeframes, maintained by the system, aid in work distribution and performance monitoring. The workflow engine will also assist in eliminating manual and paper-driven processes.

The system will have an easy to navigate GUI. The GUI will give users easy access to case level pertinent property information and improve screen flow. The solution will also provide support for electronically imaged documents, incorporate comprehensive communication tools for Single Family and its business partners, and provide a new user-friendly reporting tool. With these tools, FHA and its business partners can realize time-savings by quickly sharing information within the system.

The proposed solution will improve monitoring functions and FHA's ability to analyze program performance. The solution will incorporate the functionalities of RBTM and ITAS to provide a central location to sample, assign, and review case files. The property management system will also provide quantifiable measurements of M&M contractor and vendor performance for all areas of service and will have analytical tools available to conduct statistical analyses of portfolio data.

Through an interface with the subsidiary ledger, the ASP solution will also improve financial management. FHA plans for the solution to leverage the existing functionalities of the Subsidiary Ledger to provide payables, receivables, and funds control functionality. These improvements will increase efficiencies by decreasing staff time spent on reconciliation activities and other manually intensive processes. This joint system approach:

- Eliminates redundant system functionality.
- Optimizes use of FHA's pre-existing commercial-off-the-shelf package.
- Meets the business needs of different functional areas.

- Takes advantage of best practices and new technologies in the mortgage banking industry.
- Capitalizes on the strong accounting and funds control functionality of the FHA Subsidiary Ledger.
- Allows for a single point of entry – depending on the end-user’s business function – on a nationwide level.
- Provides support for financial statement audits and helps to eliminate control weaknesses.
- Complies with FHA Office of the Comptroller’s *Vision of Financial Management*.

As outlined in the vision, FHA plans to have the FHA Subsidiary Ledger take over financial management responsibilities for SAMS and many of the other feeder systems.

The proposed solution will directly address several important Federal mandates and business drivers, such as the Government Paperwork Elimination Act and Clinger-Cohen Act. The proposed solution also will directly respond to the direction and guidance provided by the Administration and Congress to: improve mission performance and service delivery; better manage and maintain a competent and capable workforce; and capitalize on opportunities to outsource for support and services necessary to conduct and improve business operations. Specifically, the proposed solution will:

- Transform property disposition business processes, which accounts for the sale of over 60,000 properties valued at over \$5 billion dollars and related expenses totaling nearly \$1 billion per year.
- Deliver web-based, paperless transactions in near real-time.
- Introduce knowledge-management tools to electronically collect, store, receive, and distribute information from or to internal and external stakeholders, which is expected to help minimize knowledge loss from retiring employees or changes in contractors by capturing tacit knowledge on areas of expertise and specialized business practices.
- Coordinate workflow for the property management process to reduce redundant requests and maximize oversight reviews, thereby promoting more efficient analysis and shorter cycle times.
- Provide a standard model of operations across the nation, which may apply to housing programs in other agencies.

2.4 Project Scale

FHA’s proposed approach – the use of an ASP – is consistent with its movement towards outsourced solutions. FHA began outsourcing REO operations to contractors in 1997. Recognizing that HUD does not need to be in the technology business, FHA proposes the use of an ASP to host the provider’s software application on its own servers within its own facilities. As a result, the ASP shoulders the burden of database and programming administration, backup processing, and core hardware acquisition, support, and maintenance. In addition to the technology benefits, the proposed solution will provide key improvements in business operations.

Through this project, FHA also plans to leverage the functionality of FHA’s Subsidiary Ledger to perform financial management responsibilities. As previously described, this effort conforms to

the Office of the Comptroller's *Vision of Financial Management*. The Comptroller's Vision outlined a plan to replace the accounting functions of numerous feeder systems with the Subsidiary Ledger, primarily in an effort to eliminate material weaknesses.

This project is a critical piece of FHA's effort to resolve long-standing audit issues and to remove Single Family from the GAO's high-risk list. The ASP solution is expected to cost approximately \$28.4 million over a 5-year timeframe. The solution will need to give access to over 400 users nationwide. Some users reside at HUD Headquarters, while the majority of users reside out of the HUD building – at the HOCs and M&M contractor's offices. Therefore, HUD plans to use an application that is accessible nationwide and takes advantage of the Web.

The acquisition and integration of a new system is a major undertaking that takes significant involvement on the part of FHA management to complete successfully. This particular project takes advantage of the latest technologies in the mortgage industry and uses a new approach to systems maintenance/operations. This solution will also be the first feeder system to transfer accounting functions to the Subsidiary Ledger through the development of a rules-based interface. FHA plans to leverage this rules-based interface to other FHA feeder systems.

To make this implementation successful, FHA must closely coordinate with both the FHA Subsidiary Ledger Project and HUD's Enterprise Architecture efforts. FHA must also make a commitment to establishing good program management practices to ensure proper oversight of the project. For system projects, there are a number of critical success factors, including:

- Gain executive and organizational buy-in and commitment up front.
- Establish project team with highly experienced team members and subject matter experts.
- Establish a well-defined project scope and divide the overall project into manageable components with short-term deliverables.
- Identify opportunities for early wins to gain credibility.
- Re-engineer to the solution and establish the ability to own and change critical business processes.
- Establish partnerships up front because technology/development issues (e.g., system performance) require significant lead-time to address.

2.5 Funding

FHA will use a combination of Working Capital Funds and Program Funds from both the Mutual Mortgage Insurance and General Insurance Treasury Accounts to support the systems development lifecycle costs.

2.6 Schedule of Events

The Study of Single Family Property Management Systems and Data was initiated in October 2002. Since that time, FHA has developed many of the Initiate phase documents required by HUD's SDM. These documents were submitted according to the following schedule:

- *Needs Statement* on June 9, 2003.
- *Feasibility Study* on June 9, 2003.

- *Risk Analysis* on June 16, 2003.
- *Cost/Benefit Analysis* on June 16, 2003.
- *System Security and Privacy Plan* on June 16, 2003.
- *Project Plan* on June 23, 2003.

FHA has also received approval to proceed with the project from several key stakeholders, including the OCIO. A detailed project workplan that outlines dates for the Initiate phase project deliverables is incorporated as part of the *Project Plan*.

In the Define phase, FHA plans to update or complete the *System Support and Acquisition Plan*, *Functional Requirements Document*, *Data Requirements Document*, *System Security and Privacy Plan*, and the *Internal Audit Plan*.

The following table outlines the critical milestones that should be completed in future phases of the project:

| Project Phase | Purpose |
|---|--|
| Program Management Office | Establish a program control office responsible for tracking and evaluating the program's achievement of cost, schedule, and performance objectives. Develop a program management plan as the conceptual basis for program execution, controlling the system design, and measuring and reviewing technical performance of the implementation. |
| Acquisition Plan | Design an acquisition plan that outlines an overall strategy for managing the acquisition (source selection procedures, contracting considerations, budgeting and funding, milestones for the acquisition cycle, and contract administration) and addresses the background and objectives of the acquisition (statement of need, cost, delivery or performance period requirements, and trade-offs). |
| Implementation Planning | Develop planning documents necessary for transition to the new system (e.g., Configuration Management Plan, Training Plan, etc.). |
| Requirements Confirmation/Gap Analysis | Analyze selected solution against FHA requirements and identify gaps. Determine software changes and/or process changes required. |
| Business Process Re-engineering/Change Management | Incorporate process and organizational changes resulting from the implementation. |
| Technical Environment | Establish the technical environment required to implement and deploy the system. |
| Modifications and Construction | Perform modifications to software. Design and build interfaces, enhancements, automated conversion programs, and custom reports. |
| Testing | Verify that the system correctly performs all required business functions. |
| Training | Ensure that end users are trained. Conduct 'Train the Trainers' sessions. |
| Data Conversion/Transition | Plan and control conversion to the new system and carry out a Quality Assurance review of the production system. |

| | |
|---------|---|
| Rollout | Deploy production system to sites across the organization. Recommend a phased approach to system rollout. |
|---------|---|

2.7 Decision to Proceed

At the time of this paper, the Office of Single Family Programs and the Office of the FHA Comptroller have not presented their system proposal to the Technology Investment Board or the Change Control Board. FHA has finalized the Initiate phase SDM documents and will schedule meetings with the appropriate review boards. It is essential that the *System Decision Paper*, along with the other Initiate phase documents, be approved so that FHA can resolve long-standing audit issues, reduce the cost of operating its property management system, and improve systems that support property disposition and monitoring activities.

2.8 Authorization Memoranda

Attached is each of the approved Authorization Memoranda for the SDM Initiate Phase documents.



Needs Statement Authorization Memorandum

I have carefully assessed the *Needs Statement* for the Study of Single Family Property Management Systems and Data. This document has been completed in accordance with the requirements of the HUD System Development Methodology.

MANAGEMENT CERTIFICATION - Please check the appropriate statement.

_____ The document is accepted.

_____ The document is accepted pending the changes noted.

_____ The document is not accepted.

We fully accept the changes as needed improvements and authorize initiation of work to proceed. Based on our authority and judgment, the continued operation of this system is authorized.

Zeljko Jovanovic
Project Manager

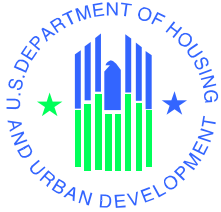
DATE

Ronald Crupi
Project Sponsor

DATE

Joe McCloskey
Project Sponsor

DATE



Project Plan Authorization Memorandum

I have carefully assessed the *Project Plan* for the Study of Single Family Property Management Systems and Data. This document has been completed in accordance with the requirements of the HUD System Development Methodology.

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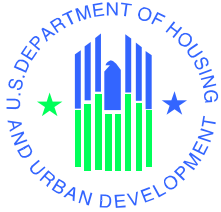
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Project Sponsor

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Joe McCloskey
Project Sponsor

DATE



Configuration Management Plan Authorization Memorandum

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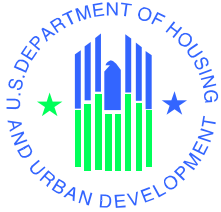
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Ronald Crupi
Project Sponsor

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Joe McCloskey
Project Sponsor

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Quality Assurance Plan Authorization Memorandum

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Zeljko Jovanovic
Project Manager

DATE

Ronald Crupi
Project Sponsor

DATE

Joe McCloskey
Project Sponsor

DATE



Feasibility Study Authorization Memorandum

I have carefully assessed the *Feasibility Study* for the Study of Single Family Property Management Systems and Data. This document has been completed in accordance with the requirements of the HUD System Development Methodology.

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Zeljko Jovanovic
Project Manager

DATE

Ronald Crupi
Project Sponsor

DATE

Joe McCloskey
Project Sponsor

DATE



Cost / Benefit Analysis Authorization Memorandum

I have carefully assessed the *Cost / Benefit Analysis* for the Study of Single Family Property Management Systems and Data. This document has been completed in accordance with the requirements of the HUD System Development Methodology.

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Zeljko Jovanovic
Project Manager

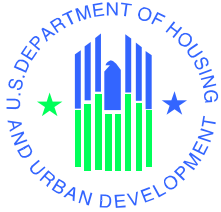
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Ronald Crupi
Project Sponsor

DATE

Joe McCloskey
Project Sponsor

DATE



Risk Analysis Authorization Memorandum

I have carefully assessed the *Risk Analysis* for the Study of Single Family Property Management Systems and Data. This document has been completed in accordance with the requirements of the HUD System Development Methodology.

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Zeljko Jovanovic
Project Manager

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Ronald Crupi
Project Sponsor

DATE

Joe McCloskey
Project Sponsor

DATE



System Decision Paper Authorization Memorandum

I have carefully assessed the *System Decision Paper* for the Study of Single Family Property Management Systems and Data. This document has been completed in accordance with the requirements of the HUD System Development Methodology.

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Zeljko Jovanovic
Project Manager

DATE

Ronald Crupi
Project Sponsor

DATE

Joe McCloskey
Project Sponsor

DATE

NAME AND TITLE
(Chairman of Authorizing Board)

DATE